Comments of the Environmental Law and Policy Center

in Response to the Illinois Commerce Commission's Request for Public Comments on the Governor's Sustainable Energy Plan

March 9, 2005

The Environmental Law and Policy Center ("ELPC") appreciates the opportunity to comment on the Commission's questions (posted March 4, 2005) on Governor Blagojevich's Sustainable Energy Plan ("Plan"). ELPC strongly supports the Plan. Significantly increasing the use of renewable energy and energy efficiency in Illinois will improve our environmental quality, increase the diversity of electricity supply, lower overall energy prices, create new jobs, and boost our economy. ELPC looks forward to working with the Commission to establish standards to implement the Plan and thereby achieve these environmental, energy, and economic development benefits for Illinois.

Renewable Energy Procurement Requirement

The most effective way to implement the Governor's proposed renewable energy portfolio standard ("RPS") is to place responsibility for meeting the standard on the electric distribution companies operating in Illinois. Electric distribution companies operating in Illinois should demonstrate on a yearly basis that they procured a specified percentage of their total energy supplied to Illinois electricity customers from renewable resources.

We believe that the most effective procurement method for an Illinois renewable energy standard is for each distribution company to establish a competitive RFP process for its renewable energy obligation. This is the preferred procurement method regardless of the overall electricity procurement methodology that may be in place starting in 2007. The winning bidders

in the procurement process would sign long term contracts (10-20 years) with the distribution company.

The Plan does not raise any technical issues that other states have not successfully resolved. Nor are there any technical issues associated with the integration of wind into either PJM or MISO which are not already well understood. We refer the Commission to three recent reports documenting wind integration issues:

- **Wind Integration Study – Final Report**
  Xcel Energy and the Minnesota Department of Commerce (September 28, 2004)
  Available at www.commerce.state.mn.us

- **The Effects of Integrating Wind Power on Transmission System Planning, Reliability, and Operations, Report on Phase 2: System Performance Evaluation**
  The New York State Energy Research and Development Authority
  (February 3, 2005)
  Available at http://www.nyserda.org/rps/default.asp

- **Wind Power Impacts on Electric-Power-System Operating Costs - Summary and Perspective on Work Done to Date** (November 2003)
  Utility Wind Interest Group
  Available at http://www.uwig.org/UWIGOpImpFinal11-03.pdf

Eighteen states have adopted renewable energy standards by regulation or in utility-specific agreements: Arizona, California, Colorado, Connecticut, Hawaii, Iowa, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Jersey, New Mexico, New York, Pennsylvania, Texas, Wisconsin and Washington D.C. Information on each state's program, including direct links to each state's RPS website, can be found here: http://www.dsireusa.org.

ELPC believes that the elements of an effective RPS include: clear eligibility rules, predictable long term targets that ensure new renewable energy supply, standards that are achievable, credible and automatic enforcement penalties which exceed the cost of compliance, and application to credit-worthy companies who are in a position to enter into long-term contracts.

The RPS in Texas has been successful by every measure. The yearly energy requirement has been exceeded every year and the 2009 goal of 2,000 MW will be met by the end of 2005. There are several reasons for the success of the program, including: (1) the amount of renewables required by the standard is strong and is backed by clear penalties of $50 per megawatt-hour for non-compliance; (2) the renewable energy is procured by the utilities through their own processes in the locations that make the most sense to them; (3) the renewable energy credit (REC) trading system has proven to be an effective market mechanism for achieving compliance at the least cost; and (4) the state has good indigenous wind resources and project siting opportunities. For more information on the Texas RPS, please see:

http://www.puc.state.tx.us/rules/subrules/electric/25.173/25.173ei.cfm or

http://www.ies.ncsu.edu/dsire/library/docs/incentives/TX03R.pdf

Eligible Renewable Energy Resources

Wind:

There are approximately 2,000 MW of wind projects, representing over $2 billion in potential infrastructure investment, in Illinois in the transmission queue. Illinois should eventually be able to install nearly 7000 MW of wind power[1], especially given rapid advances in turbine technology that are making wind turbines more efficient every year. Illinois also has a relatively robust transmission grid that will not create barriers to wind energy development such as are now occurring in the Dakotas and in western Texas.

Methane Gas from Landfills:

Illinois currently has 34 landfill gas-to-energy projects with total rated output of 107 MW of electricity. Illinois is second only to California in the number of these projects. The relatively

[1] Wind Energy Potential - An Assessment of the Available Windy Land Area and Wind Energy Potential in the Contiguous United States, Pacific Northwest Laboratory, 1991. Illinois potential average power output: 6,980 MW.

high number of projects is due to the "retail rate law" which the General Assembly passed in 1998. This law allows utilities to pay retail rate (rather than avoided cost) for electricity purchased from landfill gas-to-energy operators and then claim a credit on their electricity excise tax for this premium. According to the United States EPA Landfill Methane Outreach Program, there are an additional 20 "candidate" landfills in Illinois (landfills with the characteristics to capture and utilize methane gas) which might represent an additional 50 MW of output. However, changes in the federal tax laws have made landfill gas projects far less economically attractive than those developed prior to 1998.

Other Renewable Resources:

The following table lists currently installed projects in Illinois generating power from other "renewable energy resources" as that term is defined by Illinois statute.

Resource	**Number of Projects**	**Generation Capacity (MW)[2]**
Solar Thermal	Not available	Displaces natural gas; does not generate electricity
Solar Photovoltaic	29 (excludes residential)	0.6
Biomass	1 (utilizing mill residues)	0.7
Hydropower	10	33
Total	40	34.3

The economics of solar photovoltaic ("PV") generation are improving each year and solar PV can play an important role in reducing peak period demand throughout the state but especially in vulnerable urban areas. Maximum solar PV output is coincident with maximum electricity demand.

Biomass energy represents a large, untapped source of potential electricity generation in Illinois. Illinois has biomass feedstocks ranging from dedicated energy crops such as

[2] Represents nameplate or rated capacity.

switchgrass to corn stover to mill waste and landscape trimmings. These could either be co-fired in existing coal-fired power plants or gasified, with the resulting gas used to generate power. According to the Environmental Law and Policy Center's *Repowering the Midwest* study, biomass has the potential to provide up to 984 MW of power in Illinois by 2010 and 1,642 MW by 2020. In addition, biomass represents a firm source of baseload power which can be dispatched during periods of peak demand. However, the delivered cost of biomass feedstocks is several times that of coal on a Btu equivalent basis. While there are biomass to electricity facilities in other states (primarily burning agricultural residues and wood waste), as a general statement, wind power represents a lower cost renewable source of energy in Illinois.

There are no opportunities that we are aware of to build additional low-head hydropower facilities on Illinois rivers. In addition, the environmental impact of these facilities far exceeds their nominal power output.

Further information about renewable energy resources available in Illinois can be found here: http://www.eere.energy.gov/state_energy/opfacbytech.cfm?state=IL

Competitive Procurement

As previously mentioned, ELPC supports a stand-alone competitive procurement process to meet the RPS obligation, regardless of the procurement methodology eventually approved by the Commission for the post-2006 timeframe. A competitive process is the best way to contract renewable energy at the lowest cost to customers. The electric distribution company should be responsible for the RPS obligation. The distribution company should establish an RFP process by which the winners would be eligible to negotiate long term contracts to supply renewable energy to the utility. The ICC should review the contracts for prudence.

Interstate Renewable Energy Credit (REC) Trading

Since Illinois has abundant renewable energy resources, an Illinois RPS would drive economic development and environmental quality benefits primarily for Illinois residents. While we support renewable energy development in surrounding states, we support the Plan's initial focus on development of Illinois renewable energy resources. In addition, Illinois' robust grid system makes it possible to satisfy an Illinois RPS with Illinois wind.

Renewable credit trading systems have evolved in the Northeast where a number of states (e.g., Massachusetts, New Jersey) have rigorous RPSs but limited in-state renewable resources. In that region, a regional credit market has helped to overcome in-state resource limitations and inter-state transmission barriers.

The public utility commissions of North Dakota, South Dakota, Minnesota, Iowa and Wisconsin have studied the development of a regional renewable credit tracking and trading system for over a year. Wisconsin already has a credit tracking system in place for its utilities' voluntary green power marketing programs.

Key issues in the development of a credit system include:

- Developing a tracking and renewable energy credit "banking" system that ensures that credits can be tracked from generation to retirement.
- Developing compatible definitions of renewable energy across states.
- Developing a technology platform that provides for a liquid market and low trading costs.
- Encouraging the development of diverse renewable energy generation throughout the region, not just in states with the lowest-cost resources.

To learn more about regional credit trading systems, we encourage the Commission to read the reports from the Upper Midwest study.[3] Other important contacts are Meredith Wingate of the Center for Resource Solutions, Kevin Porter of Exeter Associates and the National Council on Electricity Policy, Ed Holt of Holt and Associates, Commissioner Phyllis Reha of the Minnesota Public Utilities Commission and Commissioner Burnie Bridge of the Wisconsin Public Service Commission.[4]

Penalties for Noncompliance

In order to demonstrate compliance with the provisions of the RPS, utilities should be required to submit an annual report containing the following at a minimum:

1) total retail kWh sales;
2) total retail kWh sales from renewable generation;
3) total amount of renewable energy credits procured.

If a utility is unable to demonstrate compliance, it should be required to pay the alternative compliance payment of $25/MWh. This amount is necessary to ensure compliance, and should provide enough incentive to procure the required amount of renewables. The compliance payment will also act as a price cap on renewable energy, so that if tax benefits for renewables are eliminated and technological improvements do not continue to materialize, Illinois consumers will not pay excessively high costs for renewable energy.

The Commission should require information sufficient for regulated parties to demonstrate compliance with the final standards. PJM is developing a generation attributes

[3] See "Results of a Survey Regarding a Potential Midwest Renewable Energy Tracking System", National Council on Electricity Policy, August 2004, www.ncouncil.org/trackingsurvey0804.pdf and proceedings from the 2nd Midwest Tradeable Renewable Credit Workshop held in Madison, Wisconsin on June 16, 2004, www.ncouncil.org/wisconsin0604.html.

[4] Meredith Wingate, Center for Resource Solutions, 415-561 -2100, mwingate@resource-solutions.org; Kevin Porter, Exeter Associates, 410-992-7500; Ed Holt, Ed Holt & Associates, 207-798-4588, edholt@igcapc.org; Commissioner Phyllis Reha, MN Public Utilities Commission, 651-296-0621, phyllis.reha@mn.state.us; Commissioner Burnie Bridge, WI Public Utilities Commission, 608-266-1265.

tracking system ("GATS") that among other things will track renewable energy generation within PJM's territory. The Midwest Independent System Operator ("MISO") likely will implement a similar system or adopt PJM's system. Although the GATS will provide all of the information necessary to establish the attributes of particular generation sources, the Commission must separately develop appropriate forms for the parties subject to the standards to demonstrate compliance with the standard. These forms should include, at a minimum, the following information:

1. Total retail electrical energy sales. Documentation of the total electrical energy sold to end-use Illinois customers in the compliance year;
2. Retail electricity sales by product. Documentation of the energy from each retail electricity product sold to end-use Illinois customers in the compliance year, verified by an independent third-party approved by the Commission;
3. Renewable energy generation. Documentation of the total energy of each retail electricity product sold to Illinois end-use customers generated by qualified renewable energy generation units in the compliance year, including but not limited to:

    a. The identification of each renewable energy generation unit from which electricity was purchased by a regulated party and sold to Illinois end-use customers for the compliance year;

        - This identification should include, at a minimum, fuel type, emissions, in-service date, and other relevant information.

    b. The quantity of renewable energy produced by each such unit for each applicable month of the compliance year; and

c. Documentation that the energy or credits associated with each renewable energy generation unit have not been sold, claimed, retired or represented as part of electrical energy output or sales, or used to satisfy obligations in jurisdictions other than Massachusetts.

We also recommend that the Commission establish a transparent process for tracking renewable energy credits associated with the program. This process should integrate with whatever GATS process is implemented in the Midwest energy markets. Finally, we recommend that the Commission's first biennial review of the standard include an analysis of what additional information, if any, is necessary to demonstrate compliance with the program.

Other sources of useful information on this issue include:

Texas: www.texasrenewables.com (ERCOT website - ERCOT is the program administrator for the Texas renewable energy program).

Massachusetts: www.mass.gov/doer/rps/index.htm

Energy Efficiency Procurement Requirement

An energy efficiency procurement requirement is a key element of the Sustainable Energy Plan. Energy efficiency is generally the lowest-cost source of electricity "generation" and can offset future load growth. Like renewable energy, energy efficiency investments also create positive net economic benefits for consumers and businesses. While energy use per capita has declined considerably in the past few decades, most estimates suggest that, with the right set of policies in place, energy use could be further reduced by 10% within five years and 20% within 15 years.

States have taken a variety of approaches to encouraging energy efficiency. 12 states have adopted systems benefit charges to support energy efficiency programs. The funds

collected from these charges have been administered by state agencies (e.g., NYSERDA) or, in the case of Vermont, an independently-contracted energy efficiency "utility." These programs, which provide both technical assistance and direct incentives, have carefully monitored and documented energy savings. Vermont, for example, has been able to achieve in excess of 1% annual reductions in electricity demand.

Energy efficiency procurement requirements are in place in other states. Texas's electric restructuring law created a requirement that electric utilities offset 10% of their demand growth through end-use energy efficiency. Utilities have easily met and are exceeding this requirement. Pennsylvania's new Alternative Energy Portfolio Standard includes energy efficiency as a "Tier 2" source of alternative energy and is currently holding hearings to determine how to implement this requirement.

The Plan recommends that utilities contract with third-party energy service companies in order to achieve these savings. This proposal is reasonable, especially since utilities in Illinois are for the most part not currently managing energy efficiency programs. We further support the Governor's recommendation that these programs be supplemented by an annual $10 million energy efficiency fund administered by Illinois' Department of Commerce and Economic Opportunity's ("DCEO") Bureau of Energy and Recycling. DCEO can play a key role not just in providing financial assistance for energy efficiency but in providing valuable technical assistance in helping businesses and residences identify energy saving opportunities.

The challenges in implementing these programs are 1) targeting those industries and companies where utilities can gain the greatest energy savings for least cost, 2) avoiding "free rider" problems (subsidizing companies to make energy efficiency investments they would be

making regardless) and 3) accurately isolating and measuring the savings resulting from these programs.

Each utility should document the energy savings through its energy efficiency efforts and file an annual report with the Commission verifying these savings. Utilities unable to deliver the proscribed level of savings would be required to pay a penalty equal to $30 per MWh for any shortfall. These funds would also be deposited into the Energy Efficiency Fund administered by DCEO. The Commission could also establish an energy efficiency credit trading system (similar to that for air pollutants) where utilities could purchase excess efficiency savings from other utilities (or industrial companies) which can procure them at lower cost. However, we believe that this would add an unnecessary layer of complexity due to the abundance of energy efficiency opportunities in each utility's customer base.

The American Council for an Energy Efficient Economy ("ACEEE") is the nation's leading policy analysis group on energy efficiency issues. ACEEE recently testified before the U.S. Senate Energy Committee on the benefits of an Energy Efficiency Resource Standard. We would encourage you to discuss this testimony and implementation issues surrounding the proposed Illinois Energy Efficiency Procurement Requirement with Neal Elliott and Martin Kushler of ACEEE[5]. We would also encourage you to contact Blair Hamilton of the Vermont Energy Investment Corporation (which administers the Efficiency Vermont program)[6]. Finally, you may wish to contact Rich Sedano, Director of the Regulatory Assistance Project (and a former public utility commissioner) who has directed a number of research projects on the role and economics of energy efficiency as part of a utility's overall portfolio planning[7].

[5] Dr. R. Neal Elliott, 202-429-8873; Martin Kushler, 517-655-7037, mgkushler@aceee.org.
[6] Blair Hamilton, Policy Director, Vermont Energy Investment Corporation, 802-658-6060, bhamilton@veic.org.
[7] Richard Sedano, Regulatory Assistance Project, 802-223-8199, rapsedano@aol.com